BLUE SEAL®

EVOLUTIONSERIES

Electric Salamanders

E91

Service Manual

© Moffat Ltd, January 2007

WARNING: ALL INSTALLATION AND SERVICE REPAIR WORK MUST BE CARRIED OUT BY QUALIFIED PERSONS ONLY.

IMPORTANT: MAKING ALTERATIONS MAY VOID WARRANTIES AND APPROVALS.

© Moffat Ltd, January 2007

Contents

This manual is designed to take a more in depth look at the E91 Salamander for the purpose of making the units more understandable to service people.

There are settings explained in this manual that should never require to be adjusted, but for completeness and those special cases where these settings are required to change, this manual gives a full explanation as to how, and what effects will result.

Section **Page Number**

1. Specifications.....1

2. Installation.....3

3. Operation.....6

3.1 Description of Controls
3.2 Racking

4. Cleaning / Maintenance.....7

5. Trouble-shooting Guide.....8

6. Service Procedures.....9

6.1 Access
6.2 Replacement

7. Accessories.....12

8. Exploded Parts Diagrams.....13

9. Circuit Schematic.....15

10. Wiring Diagram.....16

11. Service Contacts.....17

Appendix A. Mounting Hole Locations.....19

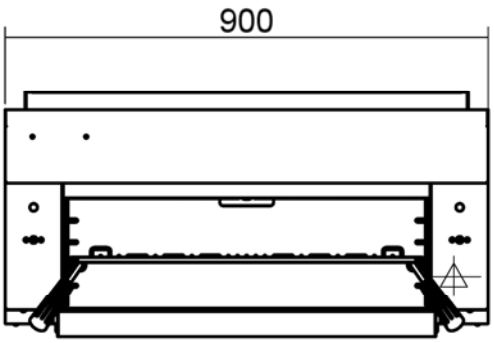
© Moffat Ltd, January 2007

© Moffat Ltd, January 2007

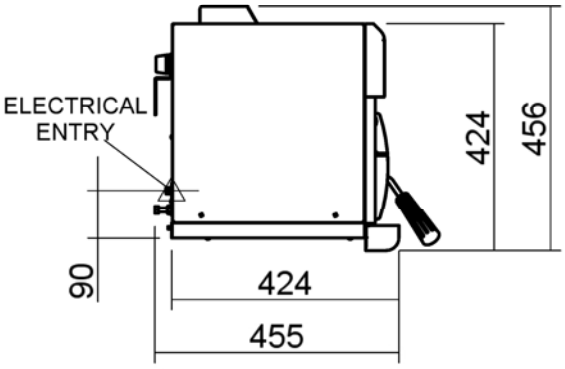
Model Numbers Covered in this Specification

E91 Electric Salamander

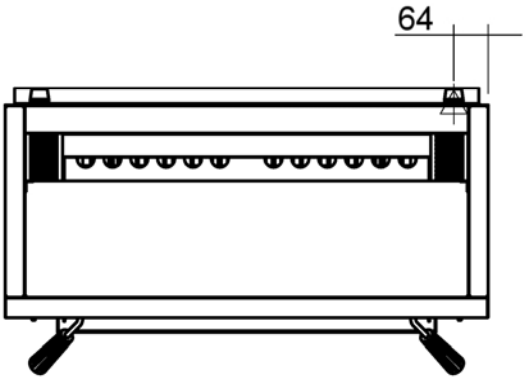
External Dimensions



Front



Side



Plan

© Moffat Ltd, January 2007

1 Specifications

Electrical Requirements

Voltage	220-240Vac, 1P+N+E
Power (@ 240Vac)	6.0 kW, 25A

Salamander Internal Dimensions

	Width	Depth	Height
E91	685 mm	330 mm	230 mm (at front)

Cooking Area

Rack Size	610mm x 310mm
Branding Plate (accessory)	610mm x 310mm

Weight (Net)

E91	41kg

© Moffat Ltd, January 2007

Installation Requirements

NOTE: It is most important that this salamander is installed correctly and that operation is correct before use. Installation shall comply with local electrical, health and safety requirements.

Blue Seal Salamanders are designed to provide years of satisfactory service, and correct installation is essential to achieve the best performance, efficiency and trouble-free operation.
This appliance must be installed in accordance with National installation codes and in addition, in accordance with relevant National / Local codes covering electrical and fire safety.

Australia / New Zealand	**AS/NZS3000**	- Wiring Rules.
United Kingdom:	**BS 7671**	- Requirements for Electrical Installations.

Installations must be carried out by authorised persons only. Failure to install equipment to the relevant codes and manufacturer's specifications shown in this section will void the warranty.

Unpacking

1. Remove all packaging and transit protection from the appliance including all protective plastic coating from the exterior stainless steel panels.
2. Check equipment and parts for damage. Report any damage immediately to the carrier and distributor.
3. Check that the following parts have been supplied with the Salamander:

1 x Salamander Rack.	1 x Wall Mounting Bracket, including;
1 x Crumb Tray.	- 2 x 25mm Black Plastic Spacers.
	- 2 x $^{3}/_{8}$" Bolts / Nuts.

4. Report any deficiencies to the distributor who supplied the unit.
5. Check that the available electrical supply is correct to that shown on the rating plate located on the front bottom corner of the right hand side panel.

Location

1. This appliance must be mounted onto a non-combustible wall or tailored stand, using the rear wall bracket and spacing screws provided.
2. Combustible walls must not protrude past the front of the appliance.
3. This appliance must not be mounted on a combustible surface or metal surface, as radiated heat will cause these surfaces to become extremely hot.
4. Caution should be taken as intense heat is emitted at the bottom front of the appliance.
5. The unit should be mounted under an extraction hood in compliance with all local regulations.

In the event that the unit is not mounted under an extraction hood, the installer must ensure that all regulations are met and that there is an unobstructed minimum distance of 750 mm from the top surface of the unit to the ceiling, which must be of non-combustible material.

NOTE: Do not obstruct or block the appliances flue. Never directly connect a ventilation system to the appliance flue outlet.

© Moffat Ltd, January 2007

2 Installation

Clearances
This unit must be installed on a non-combustible wall or tailored stand with the following clearances:-

	Combustible Surface	Non-Combustible Surface
Left/Right hand side	50mm	0mm
Rear 50mm		0mm

Top Clearance to;	
Extraction Hood	200mm
Ceiling (subject to all local regulation requirements)	300mm

Wall Mounting (to non-combustible wall only)

NOTE: Only non-combustible materials can be used in close proximity to this appliance.

1. Fix the wall mounting bracket to the wall with six screws, in such a position that the top of the bracket is level and at least 945 mm (38") above any surface beneath the unit. This will ensure that the bottom of the Salamander is at least 600 mm (24") above any surface.

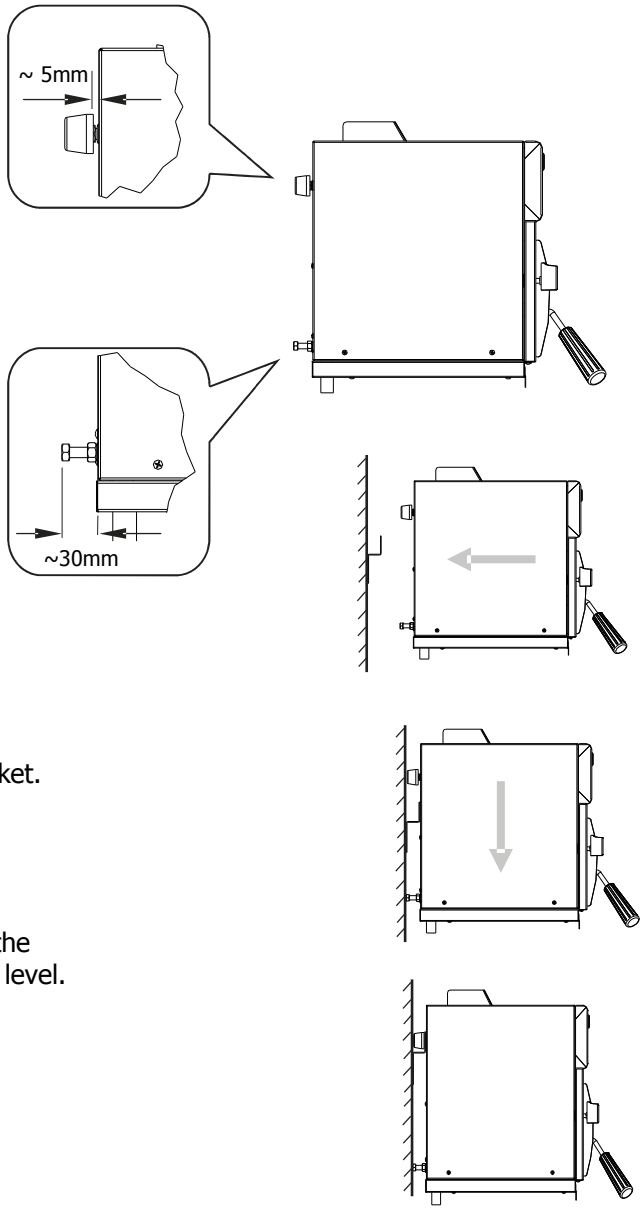
2. Fit the two black plastic spacers to the top rear corners of the unit. Leave them unscrewed by approximately 5 mm.

3. Fit the two adjusting screws / bolts into the nutserts at the bottom rear corners of the unit. These should protrude approximately 30 mm from the rear of the Salamander.

4. Lift the Salamander onto the wall bracket, lining up the black plastic spacers on the salamander with the mounting notches in the bracket.

5. Lower the Salamander onto the mounting bracket.

6. Tighten the black spacers securely and adjust the levelling screws/bolts to ensure that the unit is level.



© Moffat Ltd, January 2007

Electrical Connection

WARNING:

THIS APPLIANCE MUST BE EARTHED. IF THE SUPPLY CORD IS DAMAGED, IT MUST BE REPLACED BY A SUITABLY QUALIFIED PERSON IN ORDER TO AVOID A HAZARD.

When connecting a Blue Seal electric appliance to the main supply, ensure that the following is carried out:-

- An isolating switch is fitted within 2 m of the appliance, but not on the appliance and in such a position that the user does not have to reach across the cooking surface.
- Supply cord shall be oil-resistant, sheathed flexible cable and not lighter than ordinary poly-chloroprene or other equivalent synthetic elastomer sheathed cord (as per AS/NZS 3191 part 2.10.11. or IEC 60245-IEC-57) e.g. HO5 RN-F Type.
- The branch supply line shall be individually overload protected to the correct current rating and the supply chord shall be protected against any mechanical or thermal damage.
- A grommet is fitted around the wiring entry hole into the appliance.
- All wiring connections must be tight.

Refer to the appropriate wiring standards for the size of cable that is to be supplied to an appliance for the current drawn on that line.

NOTE: ALL ELECTRICAL CONNECTIONS MUST ONLY BE CARRIED OUT BY AN AUTHORISED PERSON.

1. Remove either the left or right hand side panel to allow access to the electrical connection terminal block. Fit the cable through the small grommet located at the rear of the unit and connect to the terminals as marked.
2. If required, the appliance can be connected to two 13 or 15 amp single phase supplies by removing the insulated wire loom between the left and right hand terminal blocks. Independent supplies can then be connected to each side.
3. The operating voltage of the salamander is stated on the rating plate affixed to the right hand side panel front bottom corner. This information is also shown in the "Specifications" Section of this manual. Ensure that the available voltage is correct.

NOTE:

- **This appliance must be grounded / earthed.**
- **Fixed wiring installations must incorporate an all-pole disconnection switch.**

Commissioning

1. Before leaving the new installation, check that all the connections are correct and, and that the unit functions in accordance with the operating instructions.
2. Check the current draw and loading for the equipment. Refer specification section for correct electrical requirements.

NOTE:

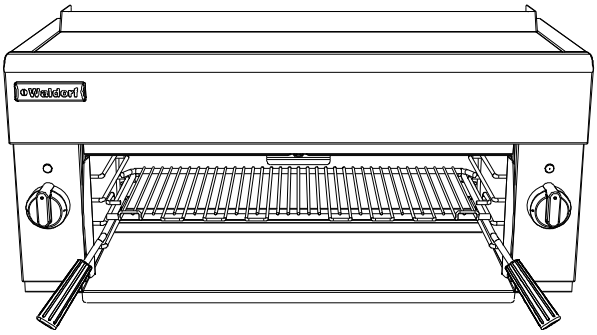
- **If for some reason it is not possible to get the unit to operate correctly, turn off the electrical power supply and contact a qualified service person. The supplier of this unit will be able to recommend a suitable person.**
- **Make sure that the electrical supply is turned off before any service or maintenance work is carried out.**

© Moffat Ltd, January 2007

3 Operation

3.1 Description of controls

The salamander has individual heat controls for the left and right sides. Select the desired heat level and allow a few minutes for the elements to heat up.



Control Knobs

0 OFF Position

1 LOW

2 MEDIUM

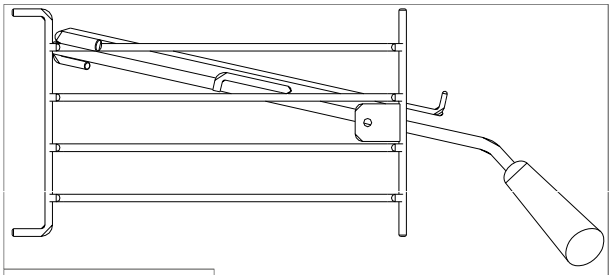
3 MAXIMUM

- Blue Seal salamanders provide two independently controlled heat zones.
- High speed grilling is provided by the two high speed infrared elements in the ceiling of the grilling compartment.
- The left hand control knob and right hand control knob operate the left side and right side elements respectively, independently of each other.

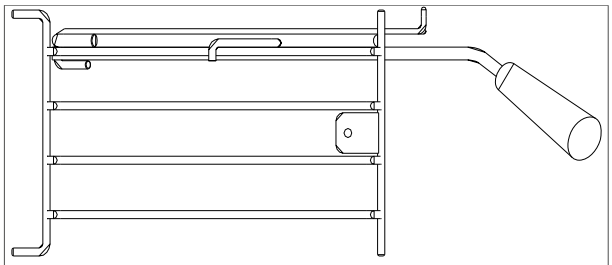
3.2 Racking

Racking System

The Rack System fitted to the Blue Seal Salamander is self-supporting when withdrawn, to allow easy loading of food. The installation of the rack is dependant on the cooking function required.



With Branding Plate



Without Branding Plate

© Moffat Ltd, January 2007

Caution:

ALWAYS TURN OFF THE GAS SUPPLY BEFORE CLEANING.

THIS UNIT IS NOT WATER PROOF.

DO NOT USE WATER JET SPRAY TO CLEAN INTERIOR OR EXTERIOR OF THIS UNIT.

4.1 Cleaning

General

To achieve the best results, cleaning must be thorough, and all controls and mechanical parts checked and adjusted periodically by a competent serviceman. If any small faults occur, have them attended to promptly.

Don't wait until they cause a complete breakdown.

Racking

For ease of cleaning of this unit and the racking system and to achieve the best results, it is recommended that the racking is removed completely from the unit and cleaned independently This will allow for a more thorough cleaning of the Salamander.

To remove the racking system, carry out the following instructions.

Remove the Grease / Crumb Tray from the underside of the salamander unit.

Remove the Branding Plate from the rack (If fitted).

Slide the rack out of the side racks and remove from the unit.

Remove the left and right hand side racks from the unit by removing the single securing screw from each of the side racks.

Withdraw the left and right hand side racks from the unit.

Refit the Racking in the reverse order once cleaning has been completed.

Stainless surfaces

Clean with detergent. Baked on deposits or discolouration may require a good quality stainless steel cleaner or stainless steel wool. Always apply the cleaner when the Salamander is cool and rub in the direction of the "grain".

Enamelled surfaces

Do not use wire brushes, steel wool or other abrasive material. Clean the enamelled surfaces regularly with a good quality domestic oven cleaner. Remove the rack and side racks from the Salamander - this allows easy cleaning of the flat enamelled side walls. Leave the tray in to collect all residue.

Grease / Crumb Tray

Empty and clean daily.

© Moffat Ltd, January 2007

5 Trouble-shooting

WARNING: ALL INSTALLATION AND SERVICE REPAIR WORK MUST BE CARRIED OUT BY QUALIFIED PERSONS ONLY.

Fault	Possible cause	Remedy
The unit does not operate (neither element works)	The mains isolating switch on the wall, circuit breaker or fuses are "off" at the power board. Incorrect electrical supply.	Turn on. Ensure electrical supply correct.
One element does not work or, One element coil does not work	Selector switch on unit faulty. Element faulty (blown).	Check switch poles - replace if faulty. **(Refer service section 6.2.2)** Replace. **(Refer service section 6.2.1)**
Indicator light does not illuminate	Indicator faulty.	Replace. **(Refer service section 6.2.3)**

© Moffat Ltd, January 2007

Section **Page no.**

6.1 Access 10

6.1.1 Control Panel.....10
6.1.2 Side Panel.....10

6.2 Replacement 10

6.2.1 Element.....10
6.2.2 Selector Switch.....11
6.2.3 Indicator Light.....11

ALL INSTALLATION AND SERVICE REPAIR WORK MUST BE CARRIED OUT BY QUALIFIED PERSONS ONLY.

⚠ **WARNING:** ENSURE GAS SUPPLY IS SWITCHED OFF BEFORE SERVICING

ALWAYS CHECK / TEST FOR GAS LEAKS AFTER SERVICE REPAIRS ON THE GAS SYSTEM

© Moffat Ltd, January 2007

6.1 Access

6.1.1 Front panel

1) Remove selector knob by pulling firmly away from control panel.
2) Undo two screws at the bottom of control panel. Drop control down to access components.
3) Undo the two screws securing the selector switch to the control panel.
4) Remove the two wires to the indicator light. Panel can now be removed.

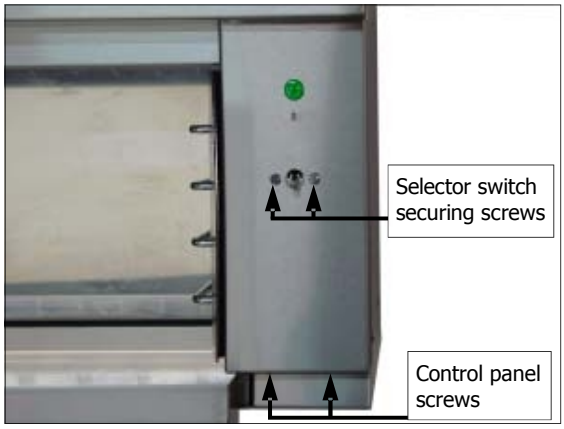


Figure 6.1.1

6.1.2 Side panel

1) Remove two screws from bottom front of panel.
2) Remove side panel by hinging out from bottom and lift out.

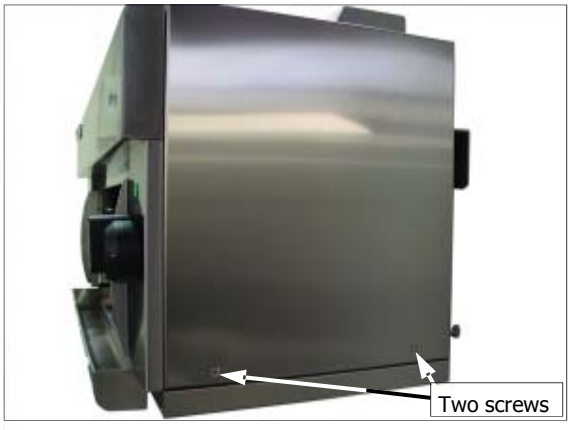


Figure 6.1.2

6.2 Replacement

6.2.1 Element

1) Remove trays and racks from unit.
2) Remove the relevant side panel by removing the two screws located towards the bottom of the applicable side.
4) Remove wires from the element terminals.
5) Loosen the element support thumb-screw (located at the front centre of the salamander).

   Slide the element support forward to release it from the thumbscrew.
6) Undo the two M5 self-clinching nuts securing the element to the inside wall of the salamander. Take care not to lose the element springs.

Figure 6.2.1

7) Replace the element and reassemble in reverse order.

NOTE: Correct element resistances (±5%):

Inner Coil: 30 ohms (1900W)
Outer Coil: 52 ohms (1100W)

© Moffat Ltd, January 2007

6.2.2 Selector switch

1) Remove the selector knob by pulling firmly away from the control panel.
2) Undo the two screws at the bottom of the control panel. Drop the control panel down to access components.
3) Undo the two screws securing the selector switch to the control panel.

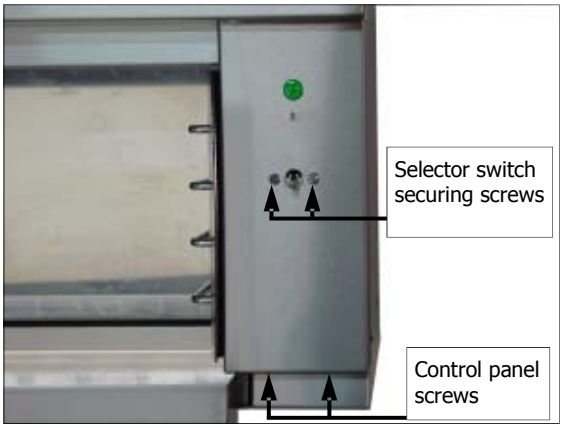


Figure 6.2.2a

4) Transfer the wires to the new selector switch, and secure to control panel with two screws.
5) Replace selector knob and control panel.

NOTE: Correct switch operation:

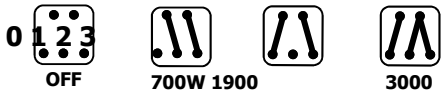


Figure 6.2.2b

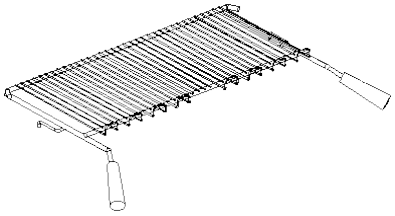
6.2.3 Indicator light

1) Undo the two screws at the bottom of the control panel. Drop the control panel down to access components.
2) Remove the wires from the rear of the neon.
3) From rear push neon through front of panel rotating clockwise.
4) Push new neon in from front of panel, and reconnect wires.
5) Replace control panel.

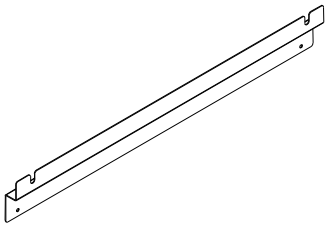
© Moffat Ltd, January 2007

7 Accessories

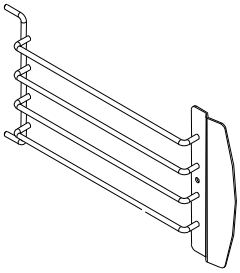
Salamander rack (017963)
Rack handle (013395)



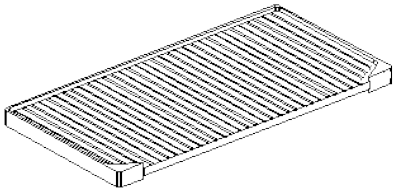
Wall mounting bracket (026096)



Side rack (026093)

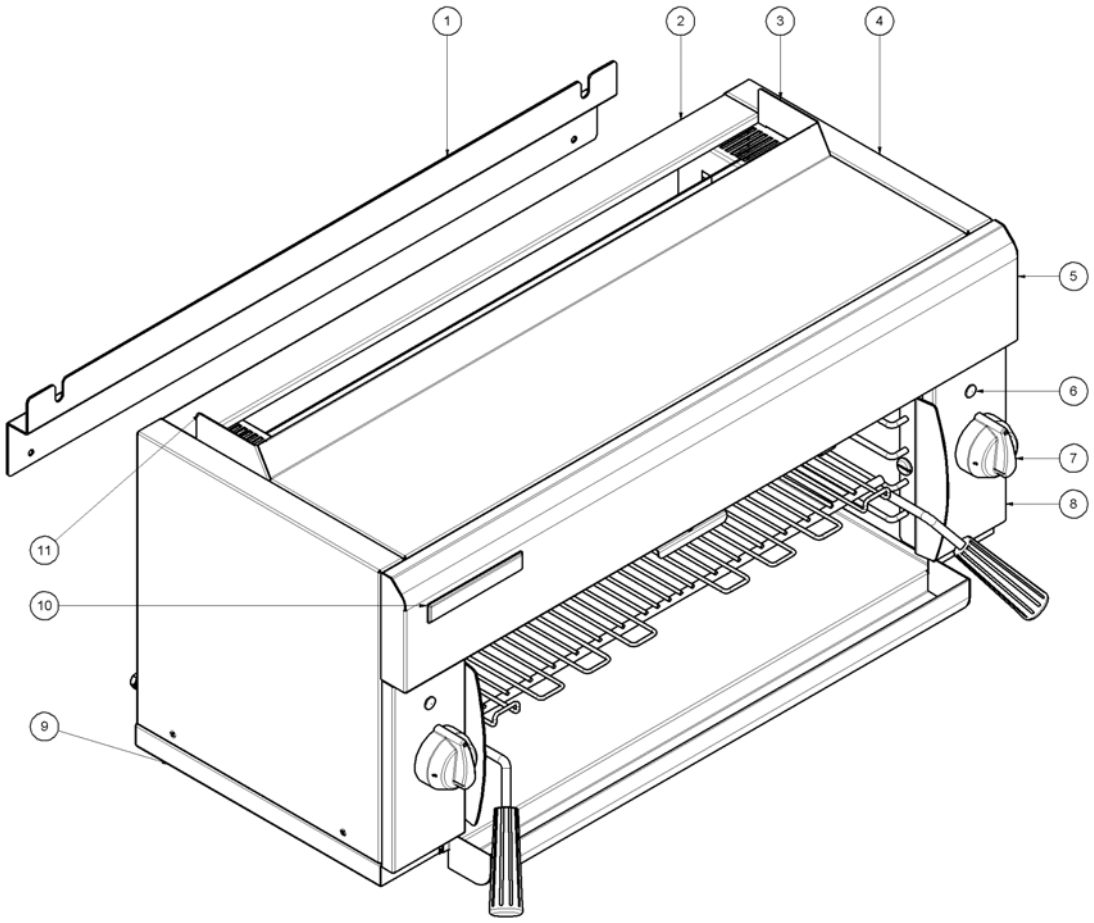


Branding plate (013418)



© Moffat Ltd, January 2007

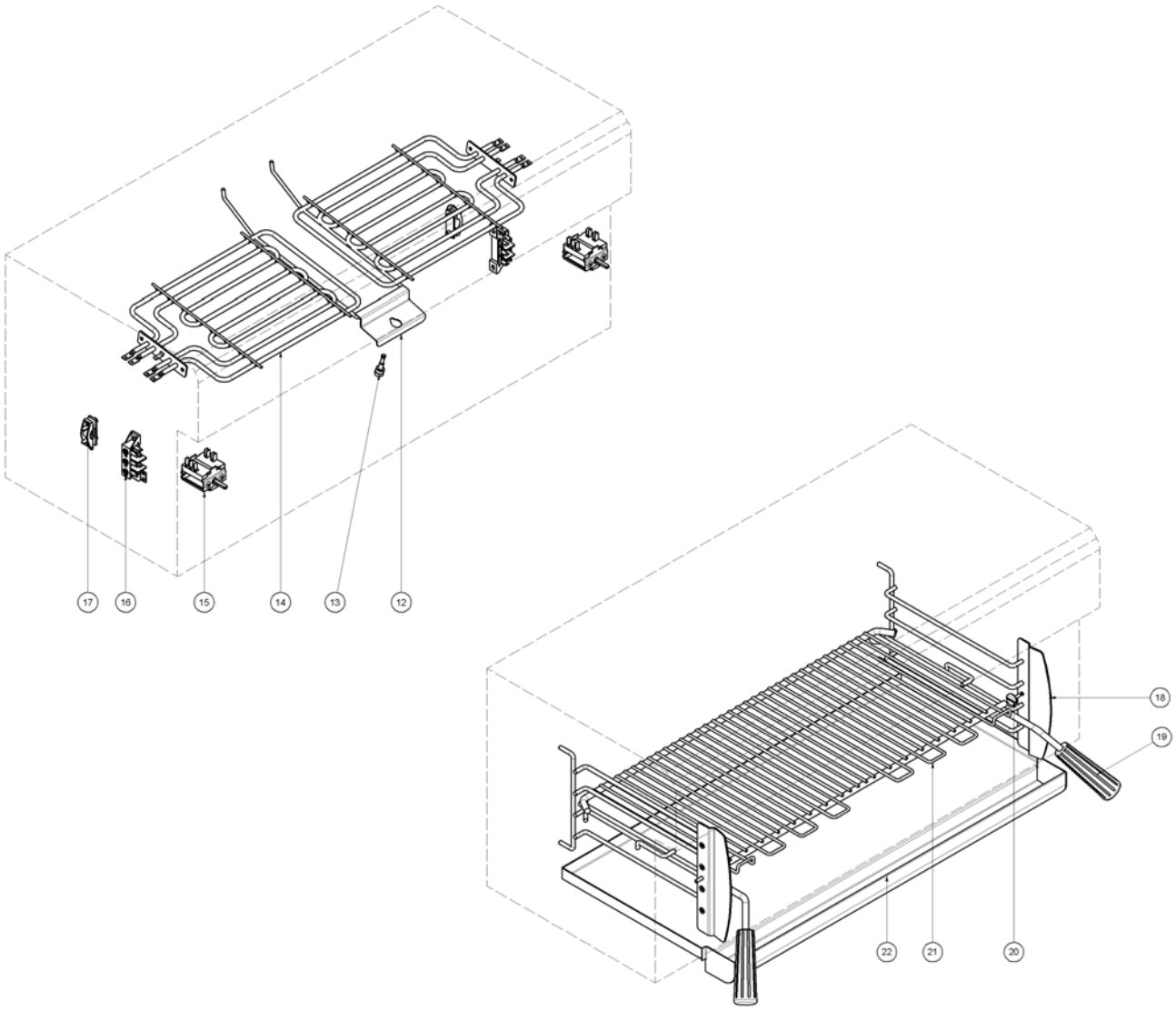
8.1 E91 Main Assembly



Item	Part No.	Description
1	026096	WALL MOUNTING BRACKET
2	026086	BACK PANEL
3	026090	FLUE END RH
4	026094	SIDE PANEL
5	227476	FRONT COVER
6	227963	NEON ORANGE
7	227394	KNOB BSEAL 6MM 1-2-3
8	005017	CONTROL PANEL ELECTRIC
9	026091	TRAY SUPPORT
10	227960	BLUE SEAL BADGE
11	026089	FLUE END LH

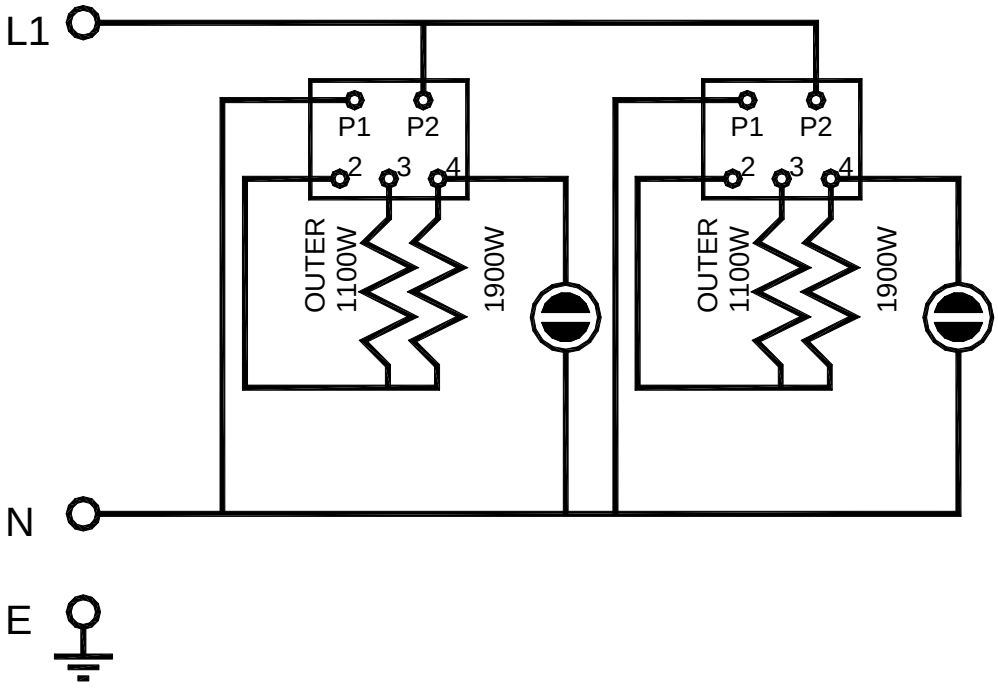
© Moffat Ltd, January 2007

8.2 E91 Electrical and Rack Assemblies

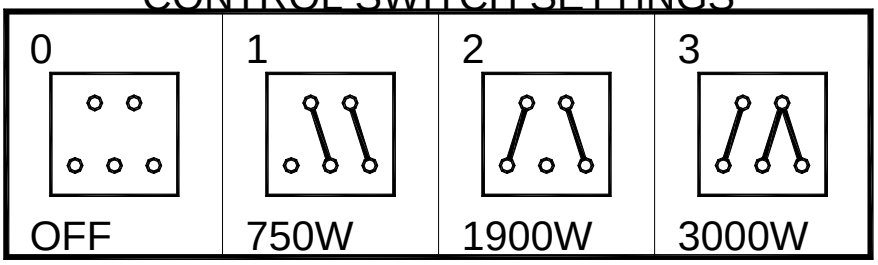


Item	Part No.	Description
12	026114	ELEMENT SUPPORT WA
13	013920	SALAMANDER ELEMENT SUPPORT SECURING SCREW
14	026088	ELEMENT 3KW DUAL COIL (Ø6.5)
15	017682	3 HEAT SWITCH
16	026160	TERMINAL BLOCK
17	026161	CABLE CLAMP
18	026093	SIDE RACK WA - SALAMANDER
19	013395	RACK HANDLE
20	227961	SIDE RACK SCREW
21	017963	RACK
22	227950	TROUGH TRAY WA

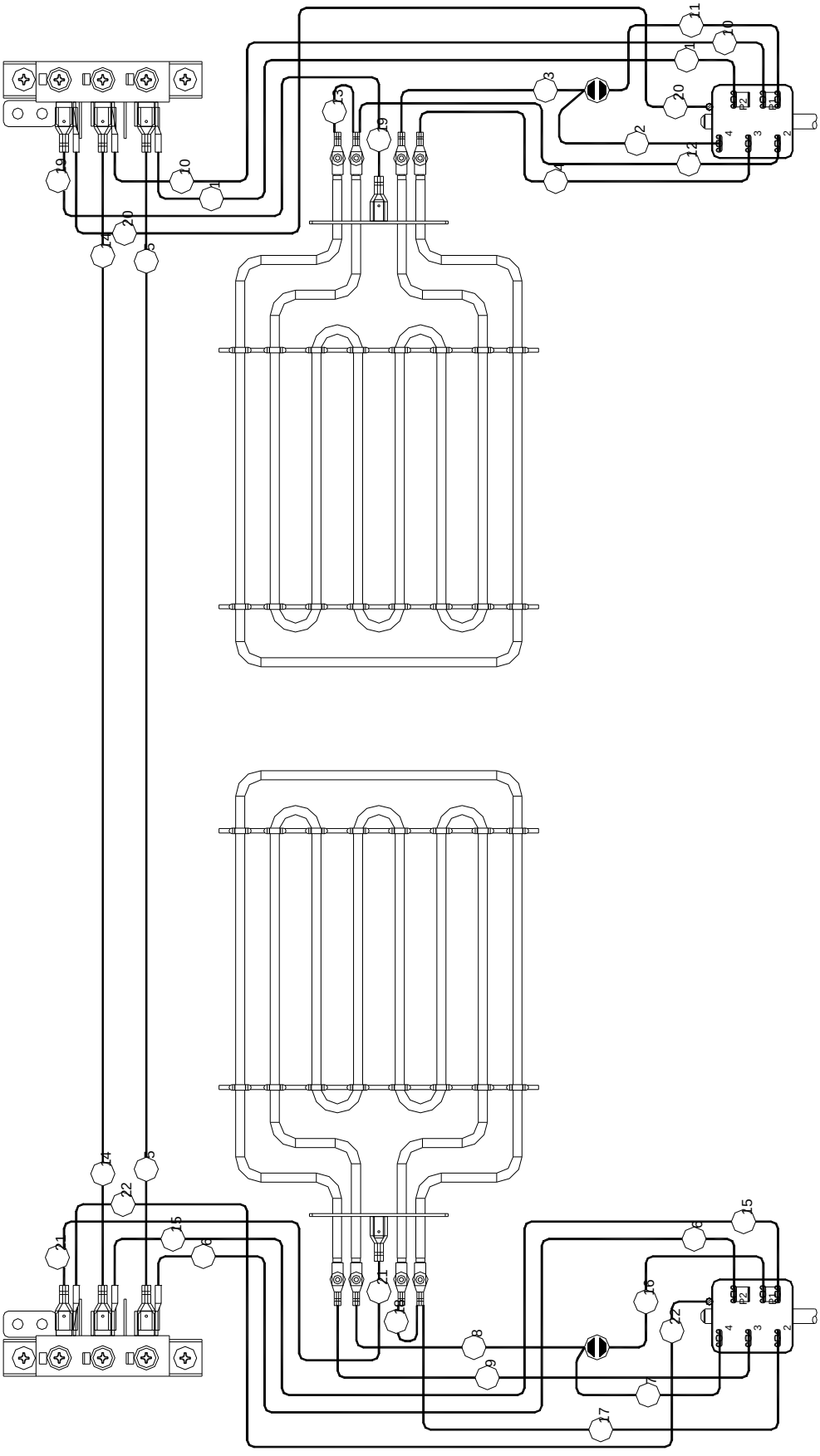
© Moffat Ltd, January 2007



CONTROL SWITCH SETTINGS



© Moffat Ltd, January 2007



© Moffat Ltd, January 2007

Australia

VICTORIA - MOFFAT PTY
HEAD OFFICE AND MAIN WAREHOUSE
740 Springvale Road
Mulgrave VIC 3170
Spare Parts Department

Tel (03) 9518 3888
Fax (03) 9518 3838
Free Call 1800 337 963
Fax (03) 9518 3895

NEW SOUTH WALES - MOFFAT PTY
Unit 3/142 James Ruse Drive
Rosehill NSW 2142
Spare Parts

Tel (02) 8833 4111

Free Call 1800 337 963
Fax (03) 9518 3895

QUEENSLAND - MOFFAT PTY
30 Prosperity Place
Geebung QLD 4034
Spare Parts

Tel (07) 3630 8600

Free Call 1800 337 963
Fax (03) 9518 3895

WESTERN AUSTRALIA - MOFFAT PTY
67 Howe St
Osbourne Park, WA 6017
Spare Parts

Tel (08) 9202 6820
Fax (08) 9202 6836
Free Call 1800 337 963
Fax (03) 9518 3895

NATIONAL COVERAGE FOR 24 HOUR SERVICE OR MAINTENANCE DIAL FREE CALL 1800 622 216 (AUSTRALIA ONLY)

Canada

SERVE CANADA
22 Ashwarren Rd
Downview Fax
Ontario M3J1Z5

Tel 416-631-0601
416-631-0315

New Zealand

CHRISTCHURCH - MOFFAT LTD
16 Osborne St
PO Box 10-001
Christchurch
Spare Parts

Tel (03) 389 1007
Fax (03) 389 1276

Free Call 0800 MOFFAT
(0800 66 33 28)
Fax (03) 381 3616

AUCKLAND - MOFFAT LTD
4 Waipuna Road
Mt Wellington
Auckland
Spare Parts

Tel (09) 574 3150
Fax (09) 574 3159

Free Call 0800 MOFFAT
(0800 66 33 28)

© Moffat Ltd, January 2007

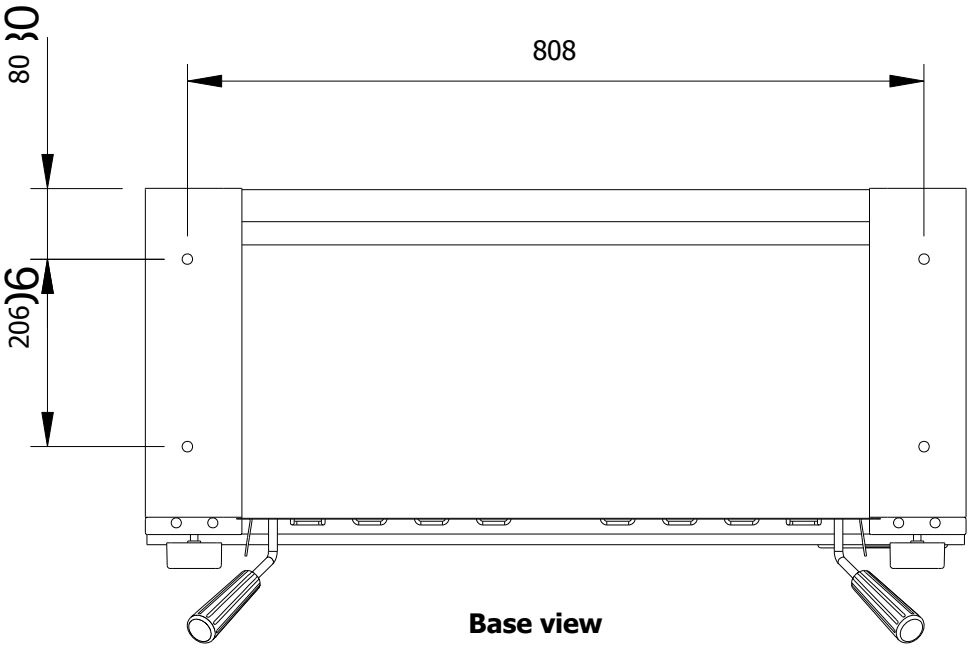
11 Service Contacts

United Kingdom

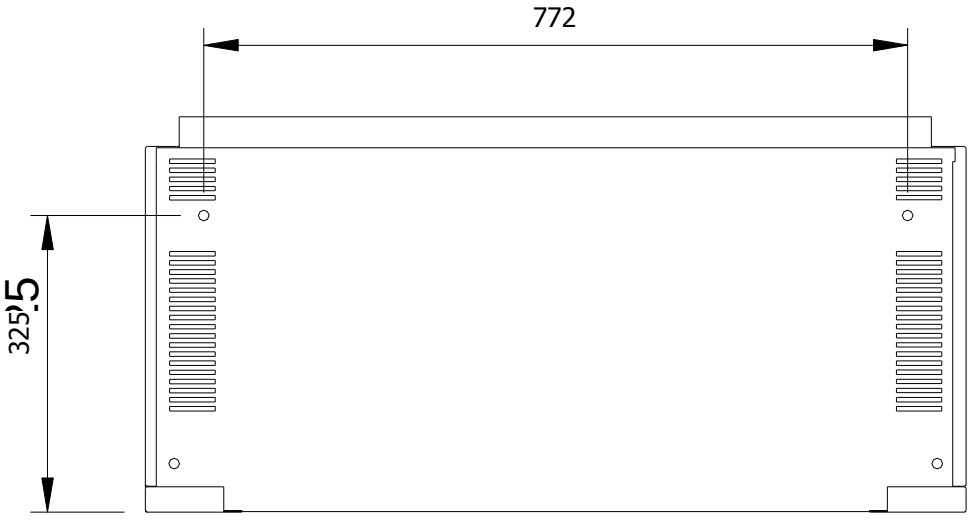
Utensils Direct
0845 873 6600
www.utensilsdirect.co.uk

© Moffat Ltd, January 2007

Mounting hole locations



Base view



Rear view

Dimensions shown in millimetres.

All mounting holes are threaded $^{3}/_{8}$" BSW

© Moffat Ltd, January 2007